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I'll Show You Mine so You'll Show Me Yours: Motivations and Personality Variables in Photographic Exhibitionism

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Given that the sharing of genital images – colloquially known as “dick pics” – has become a widespread phenomenon, the purpose of the present study was to explore men’s motivations for sending unsolicited images of their genitalia. A secondary purpose was to investigate the personality and sexuality characteristics of men who send dick pics relative to those who do not. 1,087 men completed an online survey, which included a demographic questionnaire and measures of narcissism, exhibitionism, erotophilia-erotophobia, and sexism. Also included was a measure developed specifically for the current study exploring the motivations behind sending unsolicited genital pictures as well as reactions senders hoped to elicit from their recipients. We determined that the most frequently reported motivational category for sending genital images was a transactional mindset (i.e., motivated by hopes of receiving images in return), while the most commonly desired reaction from recipients was that of sexual excitement. Further, we determined that men who reported having sent unsolicited dick pics demonstrated higher levels of narcissism and endorsed greater ambivalent and hostile sexism than their non-sending counterparts. This study is among the first to provide empirical evidence into the motivations and personality characteristics of men who send unsolicited dick pics.

The phallus and corresponding phallic imagery have long been used to represent both the male sex in general and a variety of traditionally masculine themes such as strength, power, and virility. From ancient Roman graffiti to the undersides of school desks found in the classrooms of school-aged boys, the masculine obsession with showcasing the penis has been evident for as long as history records. Modern digital technologies have allowed the phallus to continue to stand in for the man in more realistic ways than ever before: Men are now able to showcase their own genitalia. Genital pictures – known colloquially as “dick pics” – are explicit digital

images of men’s genitalia sent to recipients via web or mobile technology. Dick pics have become a topic of increased interest and social discourse in the last five or so years (Waling & Pym, 2017), with the Internet and texting environments key to understanding why men send them. Indeed, the technological revolution affords great anonymity, a condition which increases the likelihood of engagement in sexualized behaviors, especially for men (Cooper, Delmonico, Griffin-Shelley, & Mathy, 2004; Cooper, Putnam, Planchon, & Boies, 1999; Griffiths, 2001; Suler, 2004).

The dick pic has been examined empirically as an offshoot of broader academic discussions regarding other digitally-mediated sexual behaviors, such as sexting – the sending of sexually suggestive messages, using either sexually explicit language or photos/videos (Delevi & Weisskirch, 2013) – and the sending of nude images (e.g., Albury, 2015; Dobson, 2016; March & Wagstaff, 2017). While both

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men and women engage in the practice of sexting, research has been mixed regarding gender prevalence. Some research has found that both genders engage in the practice with equal frequency (Benotsch, Snipes, Martin, & Bull, 2013; Drouin, Vogel, Surbey, & Stills, 2013; Winkelman, Smith, Brinkley, & Knox, 2014), while others report a greater frequency of male sexters (e.g., Delevi & Weisskirch, 2013; Hudson, 2011) and still others report a greater frequency of female sexters (e.g., Englander, 2012; Wysocki & Childers, 2011). The primary purpose for sexting is positive, with both genders reporting motives of confidence boosting, relationship enhancement, entertainment, and sexual satisfaction (Champion & Pedersen, 2015; Parker, Blackburn, Perry, & Hawks, 2013; Woolard, 2011). The dick pic itself, however, has yet to hold the fore in such discussions. Though related to sexting and the sending of nude imagery, dick pics are a unique and distinct phenomenon for several reasons. Foremost, dick pics are a predominantly male phenomenon – that is, there does not appear to be a female equivalent to this practice (at least not one as widely recognized and prevalent). This is not to suggest that only those who exclusively identify as male can send a dick pic (transgender and non-binary individuals may also send dick pics), but rather that the act of sending unsolicited pictures of one’s genitals seems to be relatively exclusive to those who have a penis (Waling & Pym, 2017).

Men holding more positive opinions regarding sexting may be in part due to gender differences in the processing of visual sexual stimuli – in this particular context, for example, nude photos. Men tend to be more interested in and responsive to visual sexual stimuli than women (Hamann, Herman, Nolan, & Wallen, 2004; Herz & Cahill, 1997; Lykins, Meana, & Strauss, 2008; Symons, 1979; for review, see Rupp & Wallen, 2008), and fMRI research has demonstrated stronger activation in men’s amygdala and hypothalamus regions in response to such stimuli (Hamann et al., 2004). Men, therefore, are likely to be more interested in nude photos and consequently may be more aroused by and interested in the concept of sending or receiving nude photos. Such an essentialist perspective, however, cannot capture the myriad motivations which surely underlie the dick pic phenomenon. To understand men’s specific motivations for sending pictures of their penises, we must first make a few important distinctions.

Solicitation of Genital Images

Research and discourse relating to dick pics is often categorized into two distinct and competing frameworks. Waling and Pym (2017) labeled these frameworks as (1) sexting and (2) sexual harassment. These two competing frameworks diverge on the axis of consent. The sexting framework positions dick pics as an extension of conventional and consensual sexting behaviors, while the second positions dick pics as a form of non-consensual sexual interaction which can be categorized as sexual harassment, offending, or abuse.

Solicited dick pics are those which are sent following the recipient’s consent to receive the images. The recipient may ask for the images, or the sender may pre-emptively ask the recipient to confirm that they would like to receive such images. This practice, though often condemned and regarded with great concern when engaged in by adolescents (Angelides, 2013; Hasinoff, 2015; Simpson, 2013), appears to be quite prevalent amongst adults (see Klettke, Hallford, & Mellor, 2014 for review) despite the label of sexual deviance (Döring, 2014). As with other sexting practices, the sending of consensual, solicited dick pics is likely motivated by positive factors such as those reported above – relationship enhancement, self-confidence boosting, entertainment, and sexual satisfaction.

Of greater concern are the sending of dick pics which more clearly belong to the sexual harassment framework – that is, those that are received without consent from the recipient. It must be noted here that some unsolicited dick pics are, in fact, welcome; Tziallas (2015) found that many gay men using dating apps such as Grindr reported positive reactions to unsolicited dick pics. However, female reactions to receiving unsolicited dick pics tend not to be so positive, with women reporting feelings of shame, harassment, objectification, anger, and disgust (Vitis & Gilmour, 2017; Waling & Pym, 2017).

Unsolicited dick pics can be located along Kelly’s (1987) continuum of sexual violence among other forms of what McGlynn and Rackley (2017) refer to as image-based sexual abuse, defined as the “non-consensual creation and/or distribution of private, sexual images” (p. 534). By definition, the unsolicited dick pic is a private sexual image which is distributed to a non-consensual audience, thus situating itself well to the image-based sexual abuse paradigm. The unsolicited dick pic is a specific, prevalent, and much-discussed form of image-based sexual abuse which nonetheless remains much misunderstood. One of the key unanswered questions is why men so frequently and so blatantly engage in this form of sexual behavior – a study conducted in 2017 found that as many as 27% of millennial men have sent a dick pic at least once (YouGov, 2017). Therefore, the question remains, why do men send dick pics?

Motivations for Sending Genital Images

Despite a relative paucity of literature on the topic, there is no shortage of theorizing regarding men’s motivations for sending dick pics, whether solicited or unsolicited. Though motivations likely vary between those sending solicited and unsolicited pics, such distinctions have yet to be clarified. Thus, for present purposes, motivations will be examined generally – wherein specifics may be parsed from the results later – though some theorized motivations will be more applicable to one or the other class of dick pics. Herein, theorized motivations are arranged into three distinct categories: Strategic motivations, deviance motivations, and positive motivations.

Strategic Motivations. Dick pics may be an unfortunate side effect of 1.8 million years of human evolution. Men have evolved to overperceive sexual intent – a well-established finding in the evolutionary psychology literature (e.g., Abbey, 1982; Farris, Treat, Viken, & McFall, 2008; Haselton, 2003; Henningsen, Henningsen, & Valde, 2006; Maner et al., 2005). Modern men may overestimate women’s interest in receiving nude imagery based on their own receptivity in reversed roles (Ley, 2016; March & Wagstaff, 2017; Waling & Pym, 2017) and may thus send dick pics as a projection of their own sexual desires onto women (Ley, 2016).

This perspective assumes the ignorance of male parties; however, other perspectives suggest the opposite. That is, dick pics may be entirely more strategic than they seem. Sending dick pics could be viewed as a numbers game. That is, men may send such images to numerous women hoping that at least one will respond positively (Waling & Pym, 2017). Such an approach involves minimal investment by the sender. In this situation, the cost of potential missed opportunity outweighs the risk of rejection (Joel, Plaks, & MacDonald, 2017; March & Wagstaff, 2017). With hardly any potential recourse for the sending of dick pics (Vitis & Gilmour, 2017; Waling & Pym, 2017), they may theoretically be evolutionarily advantageous.

Presumably, one objective of sending dick pics is reciprocation – men hope that by sending such images, they will receive nude images in return (Gibson, 2016; Ley, 2016; Salter, 2016). Indeed, this reciprocation motivation can be viewed as coercive, as women sometimes report feeling obligated to send similar photos in response (Englander, 2012; Ross, Drouin, & Coupe, 2016; for review see Klettke et al., 2014).

Deviance Motivations. The sending of dick pics, particularly unsolicited, is strongly reminiscent of exhibitionism (the act of exposing one’s genitals to an unsuspecting stranger) (Bader, Schoeneman-Morris, Scalora, & Casady, 2008). Specifically, dick pics can be understood as a form of mediated exhibitionism, in which nude bodies are exposed to strangers via technological means such as the Internet (Jones, 2010). The relative anonymity provided by technology has been demonstrated to increase sexualized disinhibition and exhibitionist behaviors, particularly in men (Ley, 2016; e.g., Jones, 2010; Munar, 2010; Suler, 2004).

Men with exhibitionist tendencies are aroused by the prospect of women being coerced into seeing their genitals (Bader et al., 2008; Murphy & Page, 1997; Piemont, 2007). Exhibitionism may thus motivate men to send dick pics; such men would likely be aroused by the prospect of the recipient unknowingly receiving and viewing these photos (Ley, 2016). Dick pics, particularly unsolicited, are likely to elicit shocked reactions. Exhibitionists are thus likely to be aroused by these reactions, as the disgust and potential rejection by the recipient of the dick pic is a turn on for these men (Ley, 2016; Piemont, 2007). Some men may also be seeking negative reactions; small penis humiliation is a relatively prevalent fetish in which men are aroused by

insults to the size or appearance of their genitals (despite the vast amount of sexually explicit material that is offered in exploration of this subfetish, there remains a dearth of work surrounding this phenomenon – perhaps, this fetish is but a narrow example that can be experienced within the realm of erotic humiliation as a whole). Men may even feel pride that their penis is able to generate such strong reactions, regardless of their valence (Ley, 2016).

Some feminist writers have elaborated on the sexism inherent in the sending of dick pics. Such works suggest that the sending of unsolicited dick pics is an act of sexual aggression, coercion, and force which men can enact upon female recipients with little to no recourse, an act indeed intended to harm or negatively affect women (e.g., Powell & Henry, 2017; Ringrose & Lawrence, 2018; Thompson, 2018; Vitis & Gilmour, 2017). Given the suggestion that men may feel pride in response to any strong reaction to their penis (Ley, 2016) it is possible that sexism – particularly hostile sexism, which entails a strong dislike of women – may motivate men to send dick pics in a bid to elicit negative feelings from women recipients (and particularly feminist women, the target of many men’s rights groups). Men may find this exertion of power over women arousing itself, or they may find the shocked, hurt, and angry reactions to be humorous or satisfying. Sexism may thus motivate men to send dick pics, particularly unsolicited ones.

Narcissism may also play a role in motivating men to send dick pics. Narcissism is characterized by grandiosity, a need for admiration, and an exaggerated sense of self, including overly positive self-views of physical attractiveness, intelligence, and power (Oltmanns, Emery, & Taylor, 2006). More prevalent in men than in women (for review, see Grijalva et al., 2015), narcissism has previously been linked to deviant sexual tendencies in men, including coercion and exhibitionism (Figueredo, Gladden, Sisco, Patch, & Jones, 2015; Lang, Langevin, Checkley, & Pugh, 1987; Widman & McNulty, 2011), arguably both features of the sending of unsolicited dick pics. Narcissism has also been indirectly linked to heightened sexual over-perception in men (Wegner & Abbey, 2016). Narcissistic men may thus be particularly likely to overestimate the degree to which women would like to see unsolicited pictures of their genitals. Narcissistic (and other) men may also seek admiration and positive feedback through the sending of dick pics and may send such pictures with hopes of receiving positive feedback to bolster self-confidence.

Positive Motivations. The sending of dick pics may also be used as a method of flirtation. It is possible that, with awareness of the prevalence of dick pics, men may perceive this to be a normal and acceptable strategy of introduction and/or flirtation. It may also be that sending a dick pic is easier than articulating one’s sexual interest in another via words. As a form of flirtation, dick pics may be used to enhance satisfaction in an existing

relationship; some couples send nudes to each other as a method of maintaining sexual satisfaction and relational intimacy as well as receiving positive affirmations (Hertlein & Ancheta, 2014; Parker et al., 2013). It is possible that the use of a dick pic may be meant to indicate one's intentions for a sexual relationship. If a man sends a dick pic as a method of flirtation, it may be to signal that he has no interest beyond that of a sexual nature.

Purposes of the Current Study

As the sending of dick pics has risen in occurrence within our technologically-based society, and so has subsequent research examining the prevalence and reactions to those receiving them, there remains a significant gap in the research regarding men's motivations for sending these images, particularly when the images are unsolicited. With the aforementioned motivations for sending dick pics in mind, the objective of the current research was to determine the inducements behind the sending of unsolicited dick pics, as well as what reactions senders hope to elicit in recipients. A questionnaire developed for this purpose inquires into potential motivations such as flirtation, transaction, power and control, misogyny, unresolved childhood conflict, and personal sexual satisfaction. Further, an additional questionnaire investigated the desired reaction (fear, arousal, anger, etc.) that senders hope to provoke in their recipient(s). Participants were also asked to report on any previous non-technologically mediated exhibitionist behavior and to complete surveys that measure narcissism, erotophilia-erotophobia, and sexism.

This study is the first that we know of to investigate the relationships among men who send unsolicited dick pics and the variables of personality, sexualities, and prevalent motivations. Thus, two predominant research foci guided this study. First, we wished to determine where the motivations to send unsolicited dick pics were highest across various categories such as transactional, partner hunting, misogyny, or power and control, and what reactions participants hoped to elicit in recipients. Second, this study aimed to elucidate whether there may be certain similarities among the types of men who send dick pics, such as underlying traits of inherent narcissism, erotophilia-erotophobia, or benevolent and hostile sexism, thus constructing a basic profile of the personality characteristics of unsolicited image senders. Such a profile allows future researchers to narrow their scope and provides a foundation for understanding exactly how various factors intersect to give rise to the dick pic phenomenon. Due to the exploratory nature of the present study, only characteristics previously linked to phenomena similar to the sending of dick pics were investigated. That is, we hypothesized that narcissism, sexism, and exhibitionism would be higher among senders than non-senders. Given the absence of previous literature on the role of erotophilia-erotophobia in the sending of unsolicited dick pics, this variable was included for exploratory purposes.

Ultimately, the overarching goal of this work was to close the gap in dick pic research by offering empirical insight into the various reasons why men send unsolicited genital images, as well as by creating a foundational profile of the type of men who are most likely to send them.

Method

Participants

The initial sample size was comprised of 1,307 men recruited from several sources, including a research participant pool at a sizable Western Canadian university and through adverts placed in local businesses, coffee shops, and universities. Participants were also recruited via snowball sampling through various social media sites, including Facebook, Instagram, Reddit, and Twitter. Most of our sample (84%), however, was gathered through Mechanical Turk, where participants were awarded 25 cents CAD for their participation. Participating university students were offered course credit to specified psychology classes. Participating members of the public were not offered any incentive for their participation.

For the purposes of this study it was necessary to include only those participants who identified as men who have sex exclusively with women; consequently, those who identified as men who have sex with men, men who have sex with both men and women, and men uninterested in sex with either men nor women had their data excluded. Men who have sex with men were excluded from the present study as existing data indicate that the culture surrounding unsolicited genital images shared between men who have sex differs notably from the heterosexual culture surrounding such images; unsolicited genital images sent between men who have sex with men are often welcomed and positively received (Tziallas, 2015).

Surveys with insufficient completion rate (< 75%) were excluded. Given these exclusions 220 survey responses were omitted, resulting in a final sample of 1,087 men. This total was divided into two participant subcategories: men who send unsolicited genital images ($n = 523$ men), between the ages of 16 and 75 years ($M = 30.99$; $SD = 8.86$); and men who do not send unsolicited genital images ($n = 564$ men), between the ages of 16 and 92 years ($M = 33.68$; $SD = 10.96$).

Measures

Demographics. Participants were asked to respond to a 5-item questionnaire regarding their sexual orientation (to ascertain participant eligibility), age, ethnicity, relationship status, and highest level of completed education.

Narcissism Personality Inventory Scale (NPI-16; Ames, Rose, & Anderson, 2006). This 16-item scale determines incidences of subclinical narcissism in

participants. Each of the 16 items presents participants with a pair of answers from which to choose (e.g., “I really like to be the center of attention” or “It makes me uncomfortable to be the center of attention”). For every pair of responses one option is consistent with narcissism. Scoring involves computing a total score comprised of the number of responses selected consistent with narcissism. Previous research (Ames et al., 2006) has reported coefficient alpha values ranging from .65 to .72. In the current study a Cronbach’s alpha of .79 was achieved.

Sexual Opinion Survey (SOS; Fisher, Byrne, White, & Kelley, 1988). The Sexual Opinion Survey scale consists of 21 items to assess responses to various sexual stimuli. The stimuli in question include: autosexual behavior (e.g., “Masturbation can be an exciting experience.”), homosexual behavior (e.g., “Thoughts that I may have gay tendencies would not worry me at all.”), heterosexual behavior (e.g., “Thinking about engaging in sexual activity is arousing.”), sexual fantasy (e.g., “Engaging in group sex is an entertaining idea.”), and visual sexual stimuli (e.g., “I would not enjoy seeing a pornographic movie.”) (Rye, Meaney, & Fisher, 2011). Responses are made on a Likert-scale range from 1 (*strongly agree*) to 7 (*strongly disagree*), where lower total scores indicate greater endorsement of erotophilia (e.g., embracing sex and sexuality with positive regard) and higher total scores indicate greater erotophobia (e.g., holding negative regard to some aspect(s) of sex and sexuality). Previous research has found reliability coefficients ranging from $\alpha = .76$ to $.89$ (Rye et al., 2011). In the current study, a strong Cronbach’s alpha of .86 was established.

Ambivalent Sexism Inventory-Short Form (ASI-SF; Glick & Fiske, 1996). The Ambivalent Sexism Inventory examines three components hypothesized to examine hostile and benevolent sexist beliefs. These components include dominant and protective paternalism, competitive and complementary gender identity differentiation, and hostile and intimate heterosexuality (Glick & Fiske, 1996). This scale consists of 12 items answered on a 6-point Likert scale ranging from 0 (*strong disagreement*) to 5 (*strong agreement*). Six items measuring hostile sexism include statements such as, “Women seek to gain power by getting control over men” and “Women exaggerate problems they have at work”. Six items assessing benevolent sexism include statements such as, “Many women have a quality of purity that few men possess” and “Women should be cherished and protected by men”. This inventory results in two subscale scores, one for the total of items that determine hostile sexism and another for the total of items that determine benevolent sexism. Previous use of this scale (Glick & Fiske, 1996) has reported alpha values ranging from .87 to .92 for hostile sexism and values ranging from .77 to .85 for benevolent sexism. In the current study, strong Cronbach’s alpha values of .89 and .81 were achieved for the hostile sexism and benevolent sexism subscales, respectively.

Motivations Behind Sending Genital Pictures (Oswald, Lopes, & Pedersen, 2018). For the purposes of the current study, it was necessary to develop a set of items that would elucidate motivations for men to send unsolicited genital images. To this end, a 20-item scale was developed that presented possible motivations for sending such images, based on motivations frequently suggested in popular culture, including those presented in online articles which consisted of informal interviews with self-confessed dick pic senders (e.g., Harvey-Jenner, 2016), from theorizing in existing academic literature (e.g., March & Wagstaff, 2017), and through informal discussions with heterosexual men who had sent unsolicited genital images. A list of potential items was generated from these resources, which were then grouped into intuitive subcategories informed by these sources. Each item thus belonged to 1 of 6 subcategories hypothesized to be the main motivational forces behind this phenomenon. These subcategories included: transactional mindset (e.g., “I have sent dick pics hoping to receive sexy pictures in return”), partner hunting (e.g., “I have sent dick pics because that is a normal way of flirting”), power and control (e.g., “I get off on the knowledge that someone was forced to see my penis without their consent”), misogyny (e.g., “I feel a sense of dislike toward women and sending dick pics is satisfying”), unresolved childhood conflict (e.g., “I remember being made to feel shame by my parents when I got too old to be naked around them and others; sending dick pics makes me feel better”), and sexual or personal gratification (e.g., “I thrive on positive feedback about my penis”). Participants were first asked to read from a list of all twenty motivations and to select all possible reasons they had sent unsolicited genital images. They were then asked to respond to each selected item on a 3-point Likert scale, where 3 indicated the item was very much a reason why they sent dick pics and 1 indicated the item was not a likely reason they had sent dick pics.

Once participants had completed this section, they were then asked to consider what reaction they hoped to elicit in the recipient of their genital images. A list of 9 statements (e.g., “I hoped to make the person who received my dick pic feel ...”) with varying reactions were presented and participants were asked to choose all that apply. The reactions presented included sexual excitement, fear, disgust, anger, shame, shock, valued, attractive, and devalued. Additionally, participants were given two additional reaction questions that asked respondents to indicate whether they preferred a positive response or a negative response to their penis, and whether they considered receiving no response preferable to a negative response. Once all selections had been made, participants were presented with the same a 3-point Likert scale in the previous set of questions, where 3 indicated that the item was very much the reaction they wanted and 1 specified that the item was not very much the reaction they wanted.

Participants were then presented with a final set of four questions inquiring into potential exhibitionist behavior. These questions were responded to with a yes or no

response. The items asked participants whether they had ever exposed themselves in a public setting, whether they had ever exposed themselves in a private setting either to people they knew or to those they did not know (unrequested in any case), and whether they liked to spend time where they could legally be seen naked. A Cronbach's alpha value of .79 was attained for these four exhibitionist items.

Design and Procedure

After receiving ethical approval from a Western Canadian university Research Ethics Board, we recruited participants to take part in a 20-minute, anonymous online survey through the software Qualtrics (www.qualtrics.com). This study was presented as an examination of the different motivations that men may have for sending unsolicited images of their genitals to others. Upon completion of a consent form, basic demographic questions were asked, and participants were instructed to select which sexual identity best described them. Any response other than "I am a man that only has sex with women" would automatically take the participant to the end of the survey. All additional demographic questions were then asked in the same order. If participants reported having sent a dick pic they were first asked if the recipient(s) was male, female, or both and were then presented with the questionnaire assessing motivations and hoped for reactions behind sending genital pictures. If respondents reported not having sent dick pics, they skipped the sending genital pictures scale and were directed to the narcissism scale. All participants then responded to the narcissism scale, the measure of erotophilia-erotophobia, and the measures of sexism, in equivalent order.

Results

Statistical Analyses

A one-way multivariate analysis of variance (MANOVA), followed by a discriminant function analysis, were determined to be the best analyses for the study's research question of whether personality and sexuality variables distinguish men who sent unsolicited genital images from those who do not. Correlations of relationships between dependent variables are also reported. Motivational factors for sending unsolicited genital images and hoped for reactions were explored by examining frequency data.

Analyses of Differences between Senders Vs. Non-Senders

An independent samples t-test revealed that men who send unsolicited genital images were significantly younger than their non-sending counterparts, $t(1085) = 4.43$, $p < .001$. Further, chi square analyses indicated significant differences in reported ethnicity, $\chi^2(11, N = 1087) = 29.78$,

$p < .01$, and relationship status, $\chi^2(5, N = 1087) = 29.09$, $p < .001$. No significant difference was reported in highest level of completed education, $\chi^2(5, N = 1083) = 9.41$, $p = .094$. Table 1 presents participant demographics by sending status.

A one-way multivariate analysis of variance (MANOVA) examined differences between men who send unsolicited genital images from those who do not send genital images on the dependent variables of narcissism, erotophilia-erotophobia, hostile sexism, and benevolent sexism. A statistically significant MANOVA effect was obtained, $Wilks's \Lambda = .92$, $F(4, 1082) = 25.20$, $p < .001$, partial $\eta^2 = .09$. The multivariate effect size implies that 9% of the variance in the combined dependent variables was accounted for by sending versus not sending unsolicited pictures of one's genitals. Means and standard deviations are provided in Table 2.

A follow-up discriminant analysis examined sending status as the dependent variable and narcissism, erotophilia-

Table 1. Distribution of demographic characteristics by genital image sending status

	Senders <i>n</i> = 523 <i>M</i> _{age} = 33.68 (<i>SD</i> = 10.96)	Non-Senders <i>n</i> = 564 <i>M</i> _{age} = 30.99 (<i>SD</i> = 8.86)
1) Ethnicity		
a) African/Black	41 (7.8)	22 (3.9)
b) Caucasian/White	259 (49.5)	332 (58.9)
c) East Asian	18 (3.4)	21 (3.7)
d) Eurasian/Central Asian	4 (.8)	0 (0)
e) Hispanic	33 (6.3)	22 (3.9)
f) Indigenous	4 (.8)	3 (.5)
g) Middle Eastern	2 (.4)	3 (.5)
h) Pacific Islander	1 (.2)	3 (.5)
i) South Asian	142 (27.2)	127 (22.5)
j) Southeast Asian	11 (2.1)	8 (1.4)
k) Multiracial	6 (1.1)	15 (2.7)
l) Did not specify	2 (.4)	8 (1.4)
2) Relationship Status		
a) Single	138 (26.4)	157 (27.8)
b) Casually dating	114 (21.8)	65 (11.5)
c) Non-married	87 (16.6)	83 (14.7)
committed	177 (33.8)	248 (44.0)
d) Married/Civil union	7 (1.3)	7 (.7)
e) Legally separated/ divorced	0 (0)	4 (.7)
f) Widowed		
3) Education		
a) Some high school	10 (1.9)	11 (2)
b) High school diploma	46 (8.8)	39 (6.9)
c) College/university studies	395 (75.5)	402 (71.3)
d) Postgraduate studies	72 (13.8)	112 (19.9)
4) Recipients of (my) dick pic(s)		
a) Females	459 (87.8)	N/A
b) Males	40 (7.6)	N/A
c) Both females and males	24 (4.6)	N/A

Note: Percentages appear in parentheses.

Table 2. Descriptive statistics for dependent variables of men who send and do not send unsolicited genital images

	<i>M</i>	<i>SE</i>	95% CI	
			Lower	Upper
Senders				
Narcissism	6.68	.158	6.37	6.99
Erotophilia-erotophobia	60.26	.788	58.72	61.81
Benevolent sexism	18.26	.282	17.70	18.81
Hostile sexism	17.54	.312	16.93	18.15
Non-Senders				
Narcissism	4.87	.152	4.57	5.17
Erotophilia-erotophobia	59.47	.759	57.98	60.96
Benevolent sexism	16.31	.271	15.78	16.84
Hostile sexism	14.52	.300	13.93	15.11

Note: Higher scores indicate greater endorsement of each construct. Narcissism range = 0–16; erotophilia-erotophobia range = 21–147; benevolent and hostile sexism range = 0–60.

erotophobia, benevolent sexism, and hostile sexism as predictor variables. A single discriminant function revealed a reliable association between sending status and three of the four predictors, $\chi^2(4, N = 1087) = 96.48, p < .001$. As seen in Table 3, the loading matrix of correlations suggests that the variables of narcissism, benevolent sexism, and hostile sexism served as significant predictors. The derived canonical coefficient generated by this discriminant analysis also revealed that 63% of cases could be correctly classified as either senders or non-senders based on their narcissism, benevolent sexism, and hostile sexism scores. These results indicate that this set of constructs in combination provide significant discrimination between men who send and do not send unsolicited genital images.

Table 3. Discriminant function analysis: classifying senders and non-senders

Variable	Correlations with discriminant function		Univariate <i>F</i> (1, 1085)
Narcissism	.82		68.11*
Erotophilia-erotophobia	.07		.526
Benevolent sexism	.50		24.73*
Hostile sexism	.70		48.78*
Classification Summary			
Actual group	Functions at Group Centroids		Predicted group
	Senders	Non-senders	
Senders	.317	331 (63.3%)	192 (36.7%)
Non-senders	-.294	212 (37.6%)	352 (62.4%)
62.8% of cases correctly classified			

**p* < .001.

Correlations among Dependent Variables for Senders of Unsolicited Genital Images

Correlational analyses were employed for our investigation of personality characteristics of men who reported having sent unsolicited dick pics. Results of the correlational analyses in Table 4 illustrate that several significant relationships were found. For instance, both the benevolent and hostile sexism items, along with exhibitionism and erotophilia-erotophobia, were all significantly positively correlated with narcissism, suggesting that both ambivalent and hostile sexism – and greater exhibitionism and erotophobia – are related to overall increased excessive interest in or admiration of oneself and one’s physical appearance in men who send unsolicited genital images.

An interesting result was the finding that exhibitionism was significantly positively correlated with erotophobia (holding negative views of sex and sexuality), suggesting perhaps that men who have the compulsive desire to expose their genitals to unsuspecting strangers hold more sex- or genital-related concerns such as a fear of sexuality, a fear of sexual intercourse, or a low sense of genital-esteem.

Motivations for Sending Unsolicited Photos

Motivational factors were used as exploratory variables to investigate whether reasons for sending unsolicited genital images vary among senders. These motivations were organized into six separate categories including: Transactional mindset, partner hunting, unresolved childhood conflict, misogyny, sexual or personal gratification, and power and control. As indicated in Table 5, the transactional mindset was the most highly endorsed motivation for sending genital images, with an average of 43.6% of senders endorsing the items in this category. Within the transactional mindset, the most popular endorsement was “I have sent dick pics hoping to receive sexy pictures in return” followed by “I have sent dick pics hoping that the person will want to have sex with me”. The second most frequently reported motivational category was partner hunting, with an average of 32.5% of senders endorsing each item in this category. Within the partner hunting motive, the most popular validations included “I have sent dick pics in the hopes of turning someone on” and “I have sent dick pics to let someone know I have

Table 4. Summary of dependent variable correlations among senders of unsolicited genital images

	1	2	3	4	5
1. Narcissism	–				
2. Erotophobia	.29**	–			
3. Benevolent sexism	.26**	.30**	–		
4. Hostile sexism	.32**	.26**	.52**	–	
5. Exhibitionism	.39**	.44**	.20**	.24**	–

Note: **p* < .05; ***p* < .01

Table 5. *Endorsed Motivations for Sending Unsolicited Genital Images*

Motivational Categories and Items	Frequency	Percent Per Item	Percent Per Category
Transactional mindset			44%
I have sent dick pics hoping that the person will want to have sex with me.	188	35.9	
I have sent dick pics hoping to receive sexy pictures in return.	268	51.2	
Partner hunting			33%
I misinterpreted the person's sexual interest in me.	93	17.8	
I have sent dick pics because that is a normal way of flirting.	113	21.6	
I feel that if I send out enough pictures of my penis, someone will eventually respond.	113	21.6	
I have sent dick pics to let someone know I have a sexual interest in them.	254	48.6	
I have sent dick pics in the hopes of turning someone on.	277	53.0	
Sexual/Personal gratification			18%
I have sent dick pics because I like having my penis insulted.	42	8.0	
I am not confident about the appearance of my penis and hope that someone will respond positively to boost my esteem.	55	10.5	
I thrive on positive feedback about my penis.	100	19.1	
I think my penis is something that others would be excited to see.	116	22.2	
I'm proud of the way my penis looks and want to share it with others.	124	23.7	
Sending dick pics turns me on.	141	27.0	
Power and control			9%
I get off on the knowledge that someone was forced to see my penis without their consent.	39	7.5	
I like to make people angry by sending dick pics in response to a disagreement.	40	7.6	
Sending dick pics gives me a feeling of control over the person that I have sent it to.	53	10.1	
I think it is funny to send dick pics to someone who didn't request one.	65	12.4	
Unresolved childhood conflict			6%
I remember being made to feel shame by my parents when I got too old to be naked around them and others; sending dick pics makes me feel better.	25	4.8	
I miss the freedom of being naked around others that I experienced as a young child; sending dick pics is a way of reliving that feeling.	35	6.7	
Misogyny			6%
I don't like feminism and sending dick pics is a way to punish women for trying to take power away from men.	29	5.5	
I feel a sense of dislike towards women and sending dick pics is satisfying.	30	5.7	

Note: Raw data and percentages reflect instances endorsed across 523 senders.

a sexual interest in them". Unresolved childhood conflict, misogyny, sexual or personal gratification, and power and control were less frequently reported motivators than the transactional mindset and partner hunting rationales.

Hoped for Recipient Reactions

Hoped for reactions of recipients to receiving an unsolicited dick pic were also examined among participants who send unsolicited genital images. Of the nine reactions offered to participants as possible recipient reactions, the most frequently endorsed involved sexual excitement, with 82% of senders selecting the statement, "I hope to make the person who received my dick pic feel sexual excitement". The next most popular hoped-for reaction endorsed attractiveness, with 50% of senders selecting the statement, "I hoped to make the person who received my dick pic feel attractive". Third, participants selected valued reactions, with 22% of senders endorsing, "I hoped to make the person who received my dick pic feel valued". Interestingly, a significant number of unsolicited genital image senders indicated that they hoped to provoke negative emotions in recipients, with 17% hoping for shock, 15% hoping for fear, and 11% hoping for disgust.

Overall, 27% of unsolicited senders would rather receive a positive response to their penis than a negative response and 10% considered receiving no response worse than receiving a negative response (see Table 6).

Table 6. *Hoped for recipient reactions among senders of unsolicited genital images*

"I hoped to make the person who received my dick pic feel ..."	Frequency n = 523	Percentage (%)
Sexual excitement	431	82.4
Attractive	262	50.1
Valued	115	22.0
Shock	88	16.8
Fear	76	14.5
Disgust	57	10.9
Anger	45	8.6
Shame	42	8.0
Devalued	36	6.9
"I would rather receive a positive response to my penis than a negative response"	139	26.6
"I consider receiving no response to my penis to be worse than receiving a negative response"	54	10.3

Discussion

The purpose of this study was to investigate differences in the motivations, personality aspects, and sexualities of men who send unsolicited genital images relative to men who do not send such images. Within our sample of 1,087 heterosexual males, 48% ($n = 523$) confirmed that they had engaged in sending unsolicited dick pics, suggesting that this behavior is common amongst heterosexual men. Though the frequency of this behavior is not well established in the literature, this rate does align with previous research on the prevalence of sending sexts with photo content (for a review, see Klettke et al., 2014), a base of literature which examines both genders and does not make a distinction between solicited and unsolicited images.

In our study, participants reported a variety of motivations for their sending of unsolicited genital images. The most frequently reported motivational category for this behavior was the transactional mindset, suggesting that the sending of these images is motivated by hopes of receiving images in return. The second most commonly endorsed motivations fell into the category of partner hunting, further suggesting that individuals send such images with the hopes of sexually arousing the recipient, and thus potentially receiving similar images in return. These findings are consistent with previous literature indicating that men often send such images in the hopes that the recipients will be turned on by the images and reciprocate the behavior (Gibson, 2016; Ley, 2016; Salter, 2016). Although this appears to be a functional mindset in some non-heterosexual contexts (e.g., Tziallas, 2015), such behavior in heterosexual contexts may be representative of male over-perception of female sexual interest, given that women tend not to appreciate or reciprocate upon reception of these images (Ley, 2016; Ringrose & Lawrence, 2018; Vitis & Gilmour, 2017; Waling & Pym, 2017).

For some men, a recipient's negative response to their unsolicited images may have been reinforcing. Misogyny and power and control were motivational categories endorsed by some senders; men whose motivations fell into these categories endorsed statements such as "I feel a sense of dislike toward women and sending dick pics is satisfying" and "Sending dick pics gives me a feeling of control over the person that I have sent it to". These findings are consistent with feminist literature which purports that men send unsolicited genital images because of aggrieved entitlement and a desire to disturb women (Hayes & Dragiewicz, 2018; Ringrose & Lawrence, 2018; Thompson, 2018; Vitis & Gilmour, 2017). Though theoretical works proposing misogyny and control as motivations for sending unsolicited genital images have been countered as presumptuous and accused of painting men's heterosexuality as predatory and problematic (e.g., Beasley, 2015; Waling & Pym, 2017), the present results indicate the validity of these motivations for a small percentage of men in our sample.

Of interest, only approximately 18% of men reported sending unsolicited genital images specifically for their own sexual or personal satisfaction, endorsing that "sending dick pics turns me on" and "I'm proud of the way my penis looks and want to share it with others". This seems to indicate that the act of sending images itself is not typically motivated by sexual arousal, which is further corroborated by our finding that there were no group differences in erotophilia-erotophobia between individuals who reported sending unsolicited dick pics and those who did not. Thus, the popular suggestion that men send dick pics because of uncontrollable sexual desires or sexual disinhibition (e.g., Criss, 2019; Harvey-Jenner, 2016) is not supported by the present data.

Instead, men who send dick pics seem more interested in arousing the recipient of their images. Of the men who reported sending unsolicited genital images, 82% reported that they hoped to make the recipient feel sexually excited, while a further 50% stated that they hoped to make the recipient feel attractive. Though these findings suggest positive intentions on the part of the image senders, these motivations fail to acknowledge the inherent issue of consent which is violated by the sending of unsolicited dick pics. It is possible that this failure to acknowledge the issue of consent is related to male sexual over-perception bias; that is, men may fail to acknowledge that this is an issue because they themselves would appreciate reception of such images even when not solicited (Ley, 2016; Waling & Pym, 2017). This discrepancy may be related to men's greater response to visual sexual stimuli (Hamann et al., 2004; Herz & Cahill, 1997; Lykins et al., 2008; Symons, 1979; for review, see Rupp & Wallen, 2008), such that men may be more aroused by unsolicited images, and sexual over-perception bias leads them to erroneously believe that women will be similarly aroused by such images, regardless of consent.

It is also possible that men who send dick pics are intentionally violating the consent of their recipients. Our results indicate that a significant minority of men reported sending dick pics with the intention of eliciting negative emotions in the recipients, primarily shock, fear, and disgust. Further, approximately one quarter of unsolicited image senders reported that they would rather receive a positive response to a dick pic than a negative response. These findings corroborate feminist theoretical works suggesting that unsolicited genital images can be construed as a form of sexual harassment and intended to harm or negatively affect women (e.g., Powell & Henry, 2017; Ringrose & Lawrence, 2018; Thompson, 2018; Vitis & Gilmour, 2017). This suggests that the failure to acknowledge the issues of consent inherent in the sending of unsolicited dick pics is not always unintentional, and that violating consent may in fact serve the sender sexually or otherwise.

Finally, analysis of personality characteristics allowed us to examine group differences between men who do and who do not send unsolicited dick pics. Consistent with our hypotheses, men who reported having sent unsolicited dick pics

demonstrated higher levels of narcissism and endorsed both ambivalent and hostile sexism to a greater degree than did men who had not sent unsolicited genital images. Given that narcissism has previously been associated with sexually deviant behaviors such as sexual coercion (Figueredo et al., 2015), sexual harassment (Zeigler-Hill, Besser, Morag, & Campbell, 2016), and sexual over-perception in men (Wegner & Abbey, 2016), the relationship between narcissism and sending unsolicited images in our data is unsurprising; clearly though, there is a need for additional research to further examine this relationship. Men who sent unsolicited dick pics also demonstrated higher levels of both ambivalent and hostile sexism, further supporting the concept of sexist motivations for the sending of unsolicited images. The significance of the relationship between sexism and unsolicited image sending aligns with previous research demonstrating relationships between sexism and variables such as sexual aggression (Bosson, Parrott, Swan, Kuchynka, & Schramm, 2015; Masser, Viki, & Power, 2006) and sexual harassment (Begany & Milburn, 2002).

Interestingly, no significant group differences in exhibitionist tendencies between senders and non-senders were found, despite our hypotheses. The exhibitionism questions in the present study pertained to behaviors that were not technology-mediated; thus, the lack of significant results may suggest that there is little overlap between individuals who display exhibitionist tendencies online versus offline. The relative anonymity of the online sphere, which is known to increase the likelihood of engagement in sexualized behaviors (Cooper et al., 2004, 1999; Griffiths, 2001; Suler, 2004), along with the apparent normalization of unsolicited genital image sending demonstrated by the prevalence of pop culture reference to the phenomenon (Criss, 2019; Harvey-Jenner, 2016; Ley, 2016) may promote engagement in such behaviors amongst individuals who do not otherwise display exhibitionist tendencies. This conjecture is supported by the work of Kaylor, Jeglic, and Collins (2016), who found that while only five percent ($n = 56$) of their sample reported having engaged in exhibitionism in person, almost four times as many individuals ($n = 221$) reported having engaged in technology-mediated exhibitionism. Though this work included both men and women as participants and did not distinguish between solicited and unsolicited image sending, the results suggest broadly that a large proportion of individuals – more than could reasonably be expected to be paraphilic – are willing to engage in technology-mediated exhibitionist behaviors, likely due to the anonymity afforded by online contexts.

Limitations and Future Directions

Our data was collected from a self-selected convenience sample limited to heterosexual men; thus, the results may not be generalizable to broader populations. Future research on dick pics should aim to include a more diverse sample, particularly with regards to the inclusion of gay and bisexual men as well as trans, nonbinary, and intersexual individuals. Further,

the measure used to collect information regarding the dick pic sending behaviors of participants relied on self-report; it is therefore possible that participants misidentified or misrepresented their involvement in these behaviors due to memory deficits or social desirability. Additionally, the measure regarding motivations for sending genital images was not piloted; piloting would have allowed for additional adjustments to ensure the validity and reliability of the measure. The design of this measure may also have confused participants, as the measure may have appeared to contradict itself in some cases; participants were able to select motivations that led them to send dick pics, and then able to select which of these same motivations were not *likely reasons* for this behavior. The wording of our questionnaire may also have posed a limitation, as we did not specifically inquire whether men sent unsolicited photos of their own penis or of someone else's penis, though we find the second context to be less likely. It is also possible that some of our participants may have misunderstood the term "unsolicited", as a few reported having sent unsolicited dick pics but later stated that the images were requested. Our study also failed to include questions pertaining to sexual offending behavior beyond that captured by the exhibitionism questionnaire. Given that the sending of unsolicited genital images has been construed by some as a form of sexual offending (e.g., Thompson, 2018; Vitis & Gilmour, 2017), future research should examine the relationship between unsolicited image sending and other forms of sexual offending.

Despite these limitations, the results of the present study provide a framework for understanding the phenomenon of the dick pic. The large sample size and heterogeneity of the sample improve the generalizability of the current findings, and the anonymity afforded through online data collection likely minimized social desirability concerns (Booth-Kewley, Larson, & Miyoshi, 2007). This research therefore provides a basis for future investigations into these and related behaviors amongst similar populations and can provide useful information for clinicians or educators working with individuals who perceive these actions as problematic.

Future investigators should examine the specifics of the images that men report sending; for example, the platform through which the images are sent (e.g., texting, snapchat), the presence or absence of erection in the images, the position of the penis in the photo (e.g., penis alone or penis engaged in masturbation or intercourse), the relationship of the sender to the receiver, and to how many different recipients participants report sending such images. It is also possible that, given the utilization of technology inherent in the dick pic, generational differences may be a fruitful area of inquiry. That is, younger individuals – who are more likely to communicate using technology (e.g., Van Volkom, Stapley, & Amaturro, 2014) – may be more likely to engage in the technology-facilitated practice of sending of unsolicited genital images. Future research should also query the experiences of the recipients of such images to construct a more well-rounded understanding of this underexplored phenomenon.

Finally, additional research is necessary to understand why straight men report sending pictures of their genitals to other men. Our results revealed that of the 523 heterosexual-identified men who reported having sent unsolicited genital images, 5% reported having sent such images to both men and women, while another 8% of these men had sent such images exclusively to men. The motivations for straight men to send unsolicited genital images to other males were not captured by the measures used in the current study; thus, this phenomenon necessitates further investigation. It is possible that these images may have been sent to heterosexual male friends of the sender in a humorous manner, or that the images may have been pornographic in nature (i.e., depicting a sexual act but also displaying the phallus). The inclusion of measures to capture broader data regarding the content of unsolicited genital images, as suggested above, could resolve this ambiguity.

Conclusions

This study was, to our knowledge, the first to quantitatively investigate heterosexual men's motives for sending unsolicited genital images. Given current cultural anxieties surrounding sexting, revenge porn, and other forms of technology-mediated sexuality, as well as the current culture of consent, the present research provides a much-needed empirical examination of this previously unexplored phenomenon. It was established that men primarily sent unsolicited images as a strategy with the hopes of receiving either similar images or sexual interactions in return. A significant minority of men who send dick pics reported engaging in this behavior for their own sexual or personal satisfaction, while relatively few reported doing so for childhood conflict, misogynistic, or controlling reasons. By sending unsolicited genital images, most men hoped to elicit sexual arousal in the recipient(s), though a minority hoped to elicit negative feelings. In general, men who sent dick pics reported higher levels of narcissism as well as ambivalent and hostile sexism. These results provide evidence to suggest that while unsolicited dick pic sending is motivated by sexist and misogynistic ideologies in some men, the majority do not intend to cause harm or negative psychological outcomes. Thus, the unsolicited dick pic phenomenon cannot be viewed solely as a sexist campaign, nor as a positive outlet for sexuality; instead, cases must be considered on an individual basis.

Given the disparate theoretical frameworks underpinning this study – the feminist conceptualization of the dick pic as a hostile cultural product and the individualistic sexting/deviance discourse – it is perhaps unsurprising that both perspectives were represented in our results. The present research bridges the gap between these frameworks by demonstrating that an overlap exists between the two conceptualizations; thus, future research must work to pry apart the specific contributions of each framework. We find it likely

that the apparent normalization of this phenomenon is the piece that ties the two frameworks together; that is, though most men are not consciously motivated by sexism or hostility, they are contributing to these forces (intentionally or unintentionally) by participating in the sending of unsolicited genital images for reasons which inhere in the individual but are accepted, to some degree, by the contemporary milieu. Further critical consideration of the dick pic phenomenon, particularly with regard to recipient experiences, remains necessary. The dick pic lies at the intersection of the zeitgeists surrounding consent, gender, sexuality, and technology, and further research on the subject could provide insights into myriad contemporary topics such as online sexual harassment, online dating culture, and gender relations.

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